

NOTES ON THE GENUS *CLERODENDRUM* (VERBENACEAE). XVII

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CLERODENDRUM Burm.

Additional & emended bibliography: Loud., Encycl. Pl. 522, 523, 1116, & 1146, fig. 8709. 1829; Lechl., Berb. Amer. Austr. 53. 1857; Engl., Engl. Bot. Jahrb. 7: 477. 1886; K. Schum., Engl. Bot. Jahrb. 9: 220. 1888; Burkill, Dict. Econ. Prod. Malay Penins., imp. 1, 1: 589--590. 1935; D. E. Clarke & al., Sunset New West. Gard. Book, imp. 1, 247. 1967; Walden, Flow. Pl. Hong Kong pl. 40, fig. 110, & pl. 43, fig. 111. 1977; D. E. Clarke & al., Sunset New West. Gard. Book, imp. 2, 247. 1979; Mold., Phytologia 59: 462--499, 506, 507, & 510--512. 1986.

Add to Excluded Taxa: *Ovieda pillo-pillo* Meisn. in Lechl., Berb. Amer. Austr. 53. 1856 = *Ovidia pillo-pillo* Hohen., *Thymeleaceae*.

CLERODENDRUM GLABRUM var. *VAGUM* (Hiern) Mold.

Additional bibliography: Mold., Phytologia 4: 45. 1952; Wild, Rhodes. Agric. Journ. 49: 289. 1952; Wild, Veg. South. Rhodes. Term. 11. 1952; Wild, Vict. Falls Handb. 158. 1953; Pardy, Rhodes. Agric. Journ. 52: 414. 1955; Wild, Rhodes. Agric. Journ. 52: 538. 1955; Wild, Observ. Veg. Sabi 8. 1955; Anon., Assoc. Étud. Tax. Fl. Afr. Trop. Ind. 1955: 63. 1956; Coates & Palgrave, Trees Cent. Afr. 427--[429]. 1957; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 3, 101. 1959; Mold., Résumé 141, 144--146, 148--150, 152, 153, 262, 263, 267, 268, 272, 273, 344, & 450. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 3, 1: 561. 1960; Dale & Greenway, Kenya Trees Shrubs 582 & 584. 1961; Mold., Résumé Suppl. 3: 30. 1962; H. Huber in Hutchins. & Dalz., Fl. W. Trop. Afr., ed. 2, 441. 1963; Mold., Résumé Suppl. 9: 3 (1964), 12: 6 (1965), and 13: 4. 1966; C. A. Sm., Comm. Names S. Afr. Pl. 601. 1966; Anon., Assoc. Etud. Tax. Fl. Afr. Trop. Ind. 1966: 56. 1967; Hocking, Excerpt. Bot. A.11: 504. 1967; Mold., Résumé Suppl. 15: 8 & 18. 1967; Mold., Biol. Abstr. 49: 4199. 1968; Greenway, Journ. East Afr. Nat. Hist. Soc. 27: 196. 1969; Richards & Morony, Check List Fl. Mbala 237. 1969; Van der Schijff, Check List Vasc. Pl. Kruger Natl. Park 81. 1969; Gillett, Numb. Check-list Trees Kenya 461. 1970; Mold., Fifth Summ. 1: 228, 235, 239, 240, 242, 247, 249, 251, 253, 254, 256, 444, 445, 452, 454, 461, 462, 464, & 465 (1971) and 2: 622, 866, & 970. 1971; Mold., Phytologia 34: 273. 1976; Mold., Phytol. Mem. 2: 218, 225, 229, 230, 232, 237, 238, 240, 242, 243, 245, 349, 388, 391, & 537. 1980; H. N. & A. L. Mold. in Dassan. & Fosb., Rev. Handb. Fl. Ceyl. 4: 458. 1983; Mold., Phytologia 57: 390 (1985), 58: 181 (1985), and 59: 259, 335, 346, 486, 494, & 499. 1986.

Illustrations: J. Hutchins., Botanist South. Afr. 399. 1946; Coates & Palgrave, Trees Cent. Afr. [429] (in color). 1957.

This variety differs from the typical form of the species in its decidedly pubescent young branchlets, the leaf-blades being pubescent on the venation above and villous-pubescent throughout beneath,

and the larger externally pubescent calyxes.

A small bush, subshrub, or shrub, or even small shrubby tree, 0.5--10 m. tall, often branched from the base, sometimes with a strong disagreeable odor; crown bushy; stems to 20 cm. in diameter at breast height; branches terete, more or less pilose-pubescent when young with a dense, light-gray, velvety tomentum, especially at the nodes, finally glabrous; bark light-gray, tough, irregularly ridged, flaky, with prominent lenticels; nodes conspicuously thickened; branchlets woody, slender, subterete, stramineous, pilose-pubescent; twigs tinged mauve-brown; wood hard, cross-grained; sap colorless; leaf-scars on old branches very large, prominent, mostly ternate, corky; leaves decussate-opposite or ternate, often short-petiolate, deciduous; petioles very slender, 0.4--2 cm. long, densely pubescent or hirsutulous; leaf-blades subcoriaceous to subchartaceous or membranous, ovate or ovate-lanceolate to oval-elliptic, elliptic-oblong, or oblong, 2.5--8.5 cm. long, 1--5 cm. wide, apically acute or acuminate to obtuse, marginally entire, basally rounded or cuneate and acute, dark-green and sparsely pilose or softly puberulent-pubescent above, especially on the venation, finally glabrescent except for the venation, lighter and more densely pilose-pubescent to velvety-pubescent and glandular-impressed-punctate beneath; midrib slender, impressed above, prominent or prominulent beneath, pubescent on both surfaces; secondaries 4--7 per side, obscure above, arcuate-ascending, often irregularly branched, looping near the margins, prominent or only slightly prominulent beneath; vein and veinlet reticulation fine, rather sparse; inflorescence axillary and terminal, abbreviated, 3--5 cm. long, 2.5--3 cm. wide, densely canescent-villous or villous-tomentose throughout, the cymes compound, dense or loose, densely bracteolate, few- to many-flowered; peduncles slender, 0.5--1 cm. long; pedicels 2--5 mm. long, puberulent or finely pubescent; bracts lanceolate, as long as or longer than the pedicels, pubescent or villous; bractlets and prophylla linear or linear-subulate, 4--8 mm. long, tomentose or villous; flowers regular, unpleasantly (skunk-like) aromatic or fragrant, much frequented by insects; calyx tubular or subtubular to campanulate, 2--5 mm. long, externally villous or tomentose, the rim 5-toothed, the teeth narrow, about 2 mm. long, not spreading, apically acuminate; corolla hypocrateriform, white or pinkish to yellow or mauve, about 3 times as long as the calyx, the tube cylindrical, straight, 0.8--1.3 cm. long, the upper portion glandular-pubescent, the lobes oblong or suborbicular, subequal, about 4 mm. long, apically subacute, dorsally glandular-pubescent, ventrally glabrous; stamens longer than the corolla-tube, exserted; filaments and style tinged mauve, purple, or pink to pale-violet; ovary oblong, 2-celled, externally glabrous; ovules 2 per cell; fruiting-calyx shallowly cupuliform, about 5 mm. long and 1 cm. wide, externally more or less pilose or glabrate, very laxly spreading, the rim irregularly lobed; fruit drupaceous, oblong, about 9 mm. long and 6 mm. wide, fleshy, wrinkled in drying, externally glabrous.

This puzzling taxon is based on a Welwitsch collection from Angola; Thomas' *C. glabrum* var. *pubescens* is based on Welwitsch 5752 from near the sea in Benguela, Angola; *C. glabrum* var. *incarnatum* is

based on a Welwitsch collection from Mossamedes; *C. rehmanni* is based on *Rehmann 5066* (according to Thomas) from *bushveld* between Klippan and the Eland River in Transvaal; while *C. eriophyllum* is based on *Fischer 331* from Tanganyika. *Clerodendron ovale* Klotzsch is based on a Peters collection from Tanganyika. The *C. ovale* credited to Baker and to Kunth are synonyms of typical *C. glabrum* E. Mey.; the *C. ovalifolium* of A. Gray is *Faradaya ovalifolia* (A. Gray) Seem., while *C. ovalifolium* (A. L. Juss.) Bakh. is *C. floribundum* var. *latifolium* F. Muell.

Collectors have encountered *Clerodendrum glabrum* var. *vagum* on anthills, on granite or limestone outcrops and *kopjes*, among granite boulders in rocky places, along roadsides, on riverbanks, in sand-pits, in *bushveld*, *sandveld*, *lowveld*, and *sourveld*, in red, sandy, or granitic soil, among large rocks and stones in gritty soil, on bush savannas, on steep rocky hillsides and slopes, in grassland with scattered *Acacia*, *Commiphora*, *Combretum*, and clumps of shrubs, on the banks of seasonal streams with *Zizyphus*, *Acacia*, *Grewia*, etc., clustered in coppices on hillsides, on open-forested, flat, sandy plains, and in open *Brachystegia* woodlands and *Colophospermum* forests, at altitudes of 10--2300 meters, in flower from November to August, and in fruit in May and July.

In Transvaal this plant is reported to be "rare" by Story, "quite common along the range" by Repton, and "a fairly frequent spreading shrub" by Acocks; in Zimbabwe Nornby calls it "occasional". In South Africa it was found by Rodin "on sandy hills with *Syzygium cordatum* intermingled in swamps with *Ficus* and other trees".

Greenway describes it as "a stiffly branched shrub to 15 feet tall with heads of white flowers and aromatic leaves, very locally common in open grasslands with *Apodytes dimidiata*, *Varissa edulis*, *Rhus*, *Heeria*, *Croton macrostachys*, *Euclea* spp., *Osyris abyssinica*, and *Thespesia garckeana* on the lower slopes of mountains in a dark brown loam of volcanic origin" in Tanganyika.

Coates & Palgrave (1957) describe this plant as "a medium-sized tree, reaching 25 to 30 feet in height, with a trunk 4 to 10 inches in diameter and brown in colour.....[with] A one- or two-seeded drupe turning dark brown or black when fully mature" and occurring in Southern Rhodesia [=Zimbabwe]. Northern Rhodesia [=Zambia] and Nyasaland [=Malawi].

Hiern (1900) describes his two varieties of *Siphonanthus glabra* as follows: "Var. *incarnata*. A shrub, 2 to 5 ft. high; branches shortly and softly pubescent, erect or spreading; leaves coriaceous, herbaceous green, somewhat fleshy, 1 to 2 in. long by $\frac{1}{2}$ to 1 in broad, mostly ternate; petiole $\frac{1}{4}$ to $\frac{1}{2}$ in. long; flowers flesh-coloured; stamens 4. Mossamedes. -- In thickets at the mouth of the river Bero, in sandy somewhat salt places; fl. July 1859. No. 5753. This variety has the habit of *S. (Clerodendron) Rehmannii* (Gdrke in Pl. Wilm. n. 601) from the Transvaal, but the foliage of our specimens is nearly glabrous and the corolla-tube is shorter.

"Var. *vaga*. A shrub, 2 to 3 ft. high, sparingly branched; branches pallid, tomentellous, rambling; branchlets hoary-tomentose; leaves mostly ternate or quaternate, $\frac{1}{2}$ to 1 in. long by $\frac{1}{4}$ to $\frac{1}{2}$ in. broad,

more or less pubescent; petiole 1/8 to 1/2 in. long; flowers white. Benguella. -- In maritime thickets near Benguella; fl. March 1859. No. 5752."

Dahlstrom collected *C. glabrum* var. *vagum* "in an area considered [to be] the northern outpost of Cape flora, with the precipitation from rain and mist considerably higher than elsewhere in northern Transvaal". Dyer speaks of the "flowers covering the whole tree". *Stolz 1166* appears to represent a large-leaved form. *Codd 2291* is described by its collector as having "glaucous-pubescent leaves", but the use of the term "glaucous" seems inappropriate here. Sim (1907) distinguishes the variety from the typical form of the species by "the twigs, inflorescence and under surface of young leaves pubescent".

Clerodendron rehmannii var. *tenuifolium* Merxm. is based on *Dehn 276* and the type specimen in the Munich herbarium is accompanied by a hand-colored illustration on the sheet. *Wager s.n.* was annotated in the same herbarium as being from the type locality of *C. rehmannii* but having its leaves "nearly glabrous". *Elievson 27000* is also from the type locality of *C. rehmannii* "and is in fact a very good match with the type collection". *West 1083* is said to be "intermediate between *C. rehmannii* and *C. glabrum*, the leaves not profusely gland-dotted beneath". *Smits s.n.* bears a notation: "This would key out as *C. rehmannii* but I cannot separate it from hairy forms of *C. glabrum*".

Vernacular names recorded for *C. glabrum* var. *vagum* are "nungwangala", "nyaka-chembere", "omululu", "omururu", and "umhlambuzi". The corollas are described as having been "white on *Barbosa & Moreno 10144*, *Chase 5462*, *Codd 5333*, *Galpin 9059*, *Greenway 7742*, *Peter 40596*, *Pothill & Paulo 973*, *Read 1019*, *Richards 28442*, *Rodin 4663*, *Schlieben 3148*, *3648*, & *9204*, *Story 1890*, *Tanner 1479*, *Teixeira 1783*, *Torre 8795*, *Torre & Paiva 10643*, *Werdermann & Oberdieck 1805*, and *Wormald 3/51*, "dull-white" on *Chase 1206*, "white-lilac" on *Barbosa & Moreno 9834*, "pinkish-white" on *Mendes 1161*, "white or pale-pink" on *Acocks 8846*, "pink, segments white" on *Dyer 3407*, "mauve" on *Chase 6292*, and "yellow" on *Gillet 4738*.

Keys for distinguishing this plant from its near relatives will be found in the present series of notes under *C. discolor* (Klotzsch) *Vatke* [59: 259] and *C. dusenii* *Gürke* [59: 335]. *Thomas* (1936) separates the taxa in his Section *Odontocalyx* as follows:

1. Branches and lower leaf-surface more or less glabrous; calyx 2--3 mm. long, the teeth awl-shaped and divergent; corolla-tube more or less glabrous.
2. Inflorescence closely compressed; peduncles up to 1.5 cm. long; corolla-tube 5--7 mm. long; no petiolar spur remaining on the branches; supplementary buds not visible.....*C. glabrum*.
- 2a. Inflorescence loose; peduncles to 4 cm. long; corolla-tube 7--8 mm. long; small petiolar spurs on the branches; one supplementary bud plainly visible.....*C. glabratum*.
- 1a. Branches and lower leaf-surface with white pubescence; calyx 4--5 mm. long; corolla-tube glandular-pubescent.
3. Calyx 1/2 split, the lobes plainly divergent; leaf-blades apical-

ly acuminate, basally narrowed into the petiole; corolla-tube 9--10 mm. long.....*C. rehmanni* [= *C. glabrum* var. *vagum*].

- 3a. Calyx 1/3 split, the lobes scarcely divergent; leaf-blades ovate; corolla-tube about 12 mm. long.....*C. eriophyllum* [= *C. glabrum* var. *vagum*].

Baker (1900) separates the taxa as follows:

1. Leaf-blades oblong.
2. Leaf-blades glabrous.....*C. glabrum*.
- 2a. Leaf-blades slightly pubescent beneath.....*C. ovale*.
- 1a. Leaf-blades ovate, basally round, very pubescent.

Pearson (1901) separates them as follows:

1. Leaf-blades profusely gland-dotted beneath; corolla-tube not exceeding 1/3 inch long.....*C. glabrum*.
- 1a. Leaf-blades not gland-dotted beneath; corolla-tube not less than 1/3 inch long.....*C. rehmanni*.

Dale & Greenway (1961) distinguish them as follows:

1. Leaf-blades glabrous or glabrescent.....*C. glabrum*.
- 1a. Leaf-blades always pubescent.....*C. eriophyllum*.

Some parts of *Clerodendrum glabrum* var. *vagum* are used by natives to make a purgative for calves. The roots are pounded into a mash and then made into a porridge to treat human diarrhea.

Rübsaamen (1911) records finding the acarocedidium of gall-insects on the leaves and flowers of this plant in Mombasa.

Dale & Greenway (1961) assert that *C. glabrum* var. *vagum* is found in the southern and coast provinces of Kenya, citing *Bally 7712*, *Drummond & Hemsley 2994*, *Edwards E.120*, *Greenway 7742*, and *Harrer 1391*. Van der Schijff (1969) lists it from Kruger National Park, citing *Codd 5333*. Richards & Morony (1969) found it at Mbala, citing *Richards 16129*. Greenway (1969) cites *Bally 7712* from Tsavo East National Park. Wild (1953) cites *Allen 257* and *Rogers 5528 & 5561* from Victoria Falls.

Baker (1900) cites for *C. ovale*: *Hildebrandt 1298*, *Holst 3076*, and *Peter s.n.* from Tanganyika, and for *C. eriophyllum*: *Fischer 331* from Tanganyika.

Pearson (1901) cites for *C. rehmanni*: *Rehmann 5066*, *5468*, *6199*, & *6200* and *Wilms 601* from Transvaal and *Junod 161* from Mozambique, and for *C. glabrum* var. *ovale*: *Cooper 1214* and *Wood 1204* from Natal.

Thomas (1936) cites for *C. glabrum* var. *pubescens*: *Welwitsch 5752* (type) & *5753* from Angola; for *C. rehmanni*: *Rehmann 5066* (type) and *Wilms 601* from Transvaal, *Troll 6007* from Natal, *Junod 161* from Mozambique, *Verdick s.n.* from Zaire, and *Merker 725a* from Tanganyika; and for *C. eriophyllum*: *Busse 1043*, *Endlich 370*, *Fischer I.331* (type), *Schlieben 3648*, and *Stolz 1166* from Tanganyika, *Engler 2851* from Zimbabwe, and *Rehmann 6200* from Transvaal.

Material of *C. glabrum* var. *vagum* has been widely distributed in herbaria as typical *C. glabrum* E. Mey. and also as *C. acerbianum* (Vis.) Benth. & Hook. On the other hand, the *Jaasund 2068*, *Kuntze s.n.* [Clairmont, 10/3/94] and *Stolz 1166*, distributed as var. *vagum*, actually seem to be typical *C. glabrum* E. Mey., *Faulkner 2785* is the type collection of *C. eriophylloides* Mold., and *Schlieben 5866* is *C. lindense* Mold.

Citations: ZAIRE: Verdick 51 (Br, N). TANZANIA: Tanganyika: Burt 5640 (Br); Busse 1043 [Peter 51871] (B); Endlich 370 (Mu); Faulkner 1869 (S); Greenway 7742 (Af); Peter 36034 [V.142] (B), 36040 [V.142] (B), 40596 [V.241] (B); Rauh 200a (Mu); Richards 28442 (Ac); Schlieben 3148 (Mu), 3648 (B, Br, N, S); Tanner 1479 (Ca--183353, Mi). Zanzibar: Hildebrandt 1298 (V). KENYA: Greenway 8849 (N); Polhill & Paulo 973 (S). ANGOLA: Huila: Barbosa & Moreno 9834 (U1), 10144 (U1); Mendes 1652 (Ld, U1); Torre 8795 (U1). Mossamedes: G. D. Gibson 3 (N, W--2710151); Mendes 1161 (U1), 1228 (U1); Teixeira 1783 (U1). ZIMBABWE: N. C. Chase 1206 (Rh--24250), 5462 (S), 6292 (S); Dehn 276 (Mu, Rh--8742); Eyles 4485 (Rh), 4709 (Rh), 4711 (Um--152); D. E. Gibson 11/51 [Govt. Herb. Salisb. 33067] (N); Govt. Herb. Salisb. 4306 (Rh); Greenlow s.n. [Govt. Herb. Salisb. 33103] (N); J. C. Hopkins s.n. [Govt. Herb. S. Rhodes. 7789] (N), s.n. (Rh--8634); Mullin 74/51 [Govt. Herb. Salisb. 32967] (N); Norlindh & Weimarck 4768 (Mu); Nornby s.n. [Govt. Herb. Salisb. 28408] (N); Obermeyer 2330 (Ld); Seymour-Hall 12/51 [Govt. Herb. Salisb. 33024] (N); Steedman s.n. [Govt. Herb. Salisb. 4179] (N); O. West 2612 (Rh--26463); Wild 3441 [Govt. Herb. Salisb. 28236] (Bm, Ca--921064, N); Wormald 3/51 (Ca--10539). MALAWI: Stolz 1166 [Herb. Transvaal Mus. 24511] (B, E--892762, Ld, Ld--photo, N, N--photo, Ut--64390, Vi). MOZAMBIQUE: Lourenço Marques: Correira 37 (Ld, U1); Junod 161 (Br). Niassa: Torre & Paiva 10642 (U1). NAMIBIA: Loeb & Koch 311 (Ca--058579). BECHUANALAND: Pole-Evans 3266 (Af). SOUTH AFRICA: Cape Province: Kuntze s.n. [Clairmont] (N); Rodin 4663 (Ca--803711). Natal: D. Edwards 1553 (Mu); O. West 1083 (Af). Transvaal: Acocks 8846 (Af); A. G. Baker 541 (Ld--photo, N, N--photo, Na--19744, S--photo); Brain 10333 (Rh--10609); Codd 689 (Ss), 2291 (Ss), 5333 (Af, Ss), s.n. [17-1-1948] (Af, N); Dahlstrand 1517 (Go), 1942 (Go); Dyer 3407 (Af, N); Eliovson 27000 (Af); Galpin 9059 (W--1028990); Gillet 4738 (Cb); Kassner 1334 (Ed); Leendertz 705 [Herb. Transvaal Mus. 8544] (Cb, N), 1906 (Ld--photo, N, N--photo, Na--15690), 1958 [Herb. Transvaal Mus. 6555] (Cb, N); Looca 43 (We); Meebold 12835 (Mu), 12842 (Mu); Mogg 14261 (Ss); Norlindh & Weimarck 5249 (Mu); Repton 587 (Ba, Ka--92310, S); Rodin 4076 (Ca--802185); Schlieben 9204 (Mu); Smuts s.n. [Pietersburg, Dec. 1930] (Af); Stent s.n. [14-2-19] (Ew); Story 1890 (S); Wager s.n. (Tm--22967); Werdermann & Oberdieck 1805 (W--2583122). CULTIVATED: Florida: Gillis 10931 (Ac); R. W. Read 1019 [P.2022] (Ba). MOUNTED ILLUSTRATIONS: Coates & Palgrave, Trees Cent. Afr. [429]. 1957 (Ld).

CLERODENDRUM GLANDULOSUM Lindl., Edwards Bot. Reg. 30 [ser. 2, 7]: 19 in nota [as "*Clerodendron*"]. 1844; Mold., Phytologia 58: 454 & 462. 1985 [not *Clerodendron glandulosum* Colebr., 1829 & 1845].
 Synonymy: *Clerodendron glandulosum* Lindl., Edwards Bot. Reg. 30 [ser. 2, 7]: 19. 1844. *Clerodendron speciosissimum* Hort. Ang. ex Schau. in A. DC., Prodr. 11: 672 in syn. 1847 [not *C. speciosissimum* Paxt., 1837, nor Van Geert, 1836].
 Bibliography: Lindl., Edwards Bot. Reg. 30 [ser. 2, 7]: 19. 1844; Schau. in A. DC., Prodr. 11: 672. 1847; Bakh. in Lam & Bakh., Bull. Jard. Bot. Buitenz., ser. 3, 3: 88, 109, & ix. 1921; Mold., Phytolo-

gia 58: 454, 457, & 462. 1985.

Lindley (1844) describes this plant as follows: "There is also in English gardens a *Clerodendron*, absurdly called *C. speciosissimum*, which must not be omitted in noticing these plants. It has ovate leaves, not at all cordate, but rather truncate at the base, with few hairs on either side, and no glands; its flowers are in dense heads like those of *C. fragrans*, about the size of *C. squamatum*, and are surrounded by long narrow permanent bracts, which usually have one or more oval glandular spaces on their surfaces; the calyx is not enlarged but its teeth are extended into long narrow tongues. In foliage it resembles *C. trichotomum*, but its inflorescence and calyx are quite dissimilar. It may be called *C. glandulosum*, and thus defined. *C. glandulosum*: foliis subrotundo-ovatis basi truncatis v. parim cordatis pilosiusculis esquamatis subdentatis, paniculâ densâ capitatâ, bracteis lineari-lanceolatis calyce longioribus dorso glandulâ unâ alterâve pellucidâ immersa notatis, calycis 5-fidi laciniis acuminatis, corollas laciniis oblongis reflexis staminibus brevioribus, stylo longissimo".

Schauer (1847) regarded it as a valid species, but Bakhuizen (1921) regarded it as a synonym of what we now call *C. philippinum* Schau. -- obviously unlikely since both Lindley and Schauer kept the two taxa apart.

It is possible, as I indicated in my discussion of *C. colebrokianum* var. *forbesii* King & Gamble [58: 462], that this trinomial may belong in the synonymy of *C. glandulosum* Lindl. It is also possible that *C. glandulosum* may be conspecific with *C. lindleyi* Decaisne, which see. It has also quite naturally been confused with the *C. glandulosum* of Colebrook, which is now known as *C. colebrokianum* Walp., but which it does not appear to be. It has also been regarded as *C. speciosissimum* Van Geert, but Lindley definitely states that this is "absurd". The true identity of what Lindley described as *C. infortunatum* L. on pl. 19 of the Botanical Register seems to be *C. kaempferi* (Jacq.) Sieb. It most certainly is not the white-flowered *C. infortunatum* of Linnaeus.

Nothing is known to me of *C. glandulosum* beyond what is stated in its bibliography (above).

CLERODENDRUM GLOBOSUM Mold., Amer. Journ. Bot. 38: 324. 1951.

Bibliography: Mold., Amer. Journ. Bot. 38: 324. 1951; Mold. in Humbert, Fl. Madag. 174: 154, 229, 231--233, & 267, fig. 37 (6--8). 1956; Mold., Résumé 155 & 450. 1959; G. Taylor, Ind. Kew. Suppl. 12: 26. 1959; Debray in Debray, Jacquem., & Razafind., Contrib. Invent. Pl. Med. Madag. 1: 34. 1971; Mold., Fifth Summ. 1: 260 (1971) and 2: 866. 1971; Mold., Phytol. Mem. 2: 249 & 537. 1980; Mold., Phytologia 58: 189. 1985.

Illustrations: Mold. in Humbert, Fl. Madag. 174: 229, fig. 37 (6--8). 1956.

A shrub or small tree, 3--4 m. tall, apparently quite twiggy; branches and branchlets very slender, gray, glabrous, sometimes ternate; twigs of the same diameter as the branchlets, stramineous, glabrous; nodes usually not annulate; principal internodes often abbreviated and 4--15 mm. long, or elongate to 7 cm. even on the young

twigs; leaf-scars mostly very prominent and corky-margined; leaves mostly decussate-opposite, occasionally ternate, persistent or tardily deciduous; petioles very slender, 2--12 mm. long, flattened and more or less strigillose above, otherwise glabrous; leaf-blades thin-chartaceous or submembranous, grayish-greenish and somewhat lustrous above, not lustrous beneath, lanceolate, 3--9.5 cm. long, 0.8--3.2 cm. wide, apically attenuate-acute or acuminate, marginally entire, basally acute, glabrous on both surfaces, densely impressed-punctate beneath; midrib very slender, flat or slightly prominulous above, prominulous beneath; secondaries filiform, 5--7 per side, arcuate-ascending, rather obscure or very slightly subprominulous on both surfaces; vein and veinlet reticulation obscure or indiscernible on both surfaces; inflorescence terminal, globose-capitate, very densely congested, 1.5--2.5 cm. in diameter, densely many-flowered, conspicuously bracteolate, sessile, usually subtended by 1--3 leaves, occasionally proliferating and binary with one head immediately above the other, the lower one then usually smaller; bracts foliaceous, lanceolate, 1--6 subtending or scattered in the head, usually 1--2 cm. long, 3--6 mm. wide, resembling the leaves in all respects except size; bractlets sublinear, 2 or 3 at the base of each flower, sessile or stipitate, 7--8 mm. long, glabrous or scattered-pilose; pedicels to 2 mm. long or obsolete; flowers fragrant, blooming all through the year; calyx campanulate-conic, about 2 mm. long, its rim deeply 5- or sometimes 6-lobed, the lobes linear-lanceolate, subequal, 3--5 mm. long, apiculate-hooked at the apex, pilose; corolla infundibular, white, its tube 6--7 mm. long, glabrous outside, slightly pilose at the mouth within, its limb 5-lobed, the lobes about 2 mm. long, two slightly shorter than the rest, oblong, apically obtuse; stamens 4, inserted in the upper part of the corolla-tube; filaments filiform, 7--10 mm. long, long-exserted, basally slightly pilose; anthers dorsifixed, dehiscent longitudinally; style cylindrical, about 10 mm. long, glabrous; stigma bifid, the branches apparently somewhat unequal; ovary 4-sulcate, externally glabrous; fruiting-calyx incrassate, to about 5 mm. long and 8 mm. wide, venose, externally scattered-pilosulous, its rim deeply 5-lobed with elongate-lanceolate lobes or else these lobes broken off; fruit drupeous, subglobose, to about 1 cm. long and wide, nigrescent and shriveled in drying and deeply sulcate, yellow and sweet when fresh, edible, often insect-galled.

This endemic Madagascar species is based on *Humbert & Perrier* 2468 from the vicinity of Tulear, on the Fiherenana delta, at 2--10 m. altitude, in southwestern Madagascar, collected between September 14 and 25, 1924, and deposited in the Paris herbarium.

Collectors have encountered this plant on sand and limestone soil, on dunes, and in sandy or calcareous alluvium and shores, at 2--50 m. altitude, in flower in January, June, August, and September, and in fruit in August, but it is said to flower and fruit throughout the year. The only vernacular name reported for it is "varo". All collectors who describe the color of the corolla (*viz.*, *Decary* 2846, 9160, & 9601, *Greve* 51, *Humbert & Perrier* 2468, *Humbert & Swingle* 5344, and *Perrier* 12823) uniformly refer to it as "white".

A key to distinguish this species from the other Madagascar members of the genus will be found under *C. baronianum* Oliv. in the present series of notes [58: 184--190].

Citations: MADAGASCAR: *Decary 2846* (P), 3530 (N, P), 8542 (P), 9159 (P), 9160 (P), 9601 (P); *Grandidier s.n.* [Fev. 1869] (P); *Greve 51* (P); *Humbert 20078* (P); *Humbert & Perrier 2468* (E--photo of type, F--photo of type, Ld--photo of type, N--photo of type, P--type); *Humbert & Swingle 5344* (P, P, W--1528565); *Perrier 10236* (P), 12823 (P), 19245 (P); *Poisson 379* (P).

CLERODENDRUM GLOBULIFLORUM Thomas, Engl. Bot. Jahrb. 68: [Gatt. Clerod.] 99--100. 1936.

Bibliography: B. Thomas, Engl. Bot. Jahrb. 68: [Gatt. Clerod.] 6, 8, 38, 63, 93, & 99--100. 1936; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 47, 48, & 90. 1942; Hill & Salisb., Ind. Kew. Suppl. 10: 55. 1947; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 113, 114, & 181. 1949; Mold., Résumé 139 & 450. 1959; H. Huber in Hutchins. & Dalz., Fl. W. Trop. Afr., ed. 2, 439 & 443. 1963; Mold., Résumé Suppl. 15: 7. 1967; Mold., Fifth Summ. 1: 221, 223, & 225 (1971) and 2: 866. 1971; Mold., Phytol. Mem. 2: 212, 214, 215, & 537. 1980.

A shrub, about 2 m. tall, few-branched; branches spinose, gray-fuscous, excavated, glabrous, with accessory buds; leaves decussate-opposite, large; petioles 1--4 cm. long, glabrous; leaf-blades elliptic-oblong, 15--25 cm. long, 8--12 cm. wide, apically acuminate, marginally entire, basally attenuate, glabrous on both surfaces; flowers aggregate into globose cauline heads borne on the older wood; peduncles short; pedicels about 1 cm. long; bracts and bractlets subulate, about 1--1.5 cm. long, hispid; calyx globose-campanulate, about 4 mm. long and 3 mm. wide, externally glabrous or slightly ciliate; corolla yellowish, its tube about 6 cm. long, curvate, glandular-pilose, basally and apically somewhat dilated, the lobes 5, subequal, ovate-oblong, about 1.2 cm. long, distant; stamens exerted, inserted below the mouth of the corolla-tube; filaments about 8.5 cm. long; anthers 2 mm. long; style about 9 cm. long, surpassing the stamens; stigma shortly bifid; ovary about 3 mm. long; fruiting-calyx widely spreading, the limb 1.5--2 cm long, split almost to the base into 5 lanceolate or ovate-triangular lobes which are basally about 8 mm. wide, apically acute, with prominent veins.

The type of this species is *Mildbraed 6345* from the north side of St. Isabel peak, "oberhalb Basilé, Wald über der Kakaoregion", at 600--800 m. altitude, Fernando Po, collected on August 16, 1911, and deposited in the Berlin herbarium, now destroyed.

Huber (1963) describes the plant as having white corollas and violet to brownish-purple calyces, citing *Brenan 8829*, *Mutch FHI. 21853*, *Onoché FHI.40414*, *Onyeagocha FHI.7707*, and *Talbot s.n.* from Southern Nigeria, *Conrau 249*, *Daramola FHI.40612*, *Johnston s.n.*, *Keay FHI.37536*, and *Weberbauer 58* from British Cameroons, and *Mildbraed 6345* from Fernando Po, asserting that it is also found in French Cameroons.

Thomas (1936) cites only *Mildbraed 6345* from Fernando Po and

Conrau 249, Weberbauer 58, and Winkler 842 from the Cameroons.

Nothing is known to me of this taxon beyond what is stated in its bibliography (above).

CLERODENDRUM GODEFROYI Kuntze, Rev. Gen. Pl. 2: 505--506 [as "*Clerodendron*"]. 1891; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 59 & 90. 1942.

Synonymy: *Clerodendron godefroyi* Kuntze, Rev. Gen. Pl. 2: 505. 1891. *Clerodendron godefroyi* Dop ex Mold., Résumé 263 in syn. 1959. Bibliography: Kuntze, Rev. Gen. Pl. 2: 505--506. 1891; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 1, 101. 1901; Craib, Kew Bull. Misc. Inf. 1914: 284. 1914; Dop in Lecomte, Notul. Syst. 4: 13 & 13. 1920; Fedde & Schust., Justs Bot. Jahresber. 48 (1): 497. 1927; Dop in Lecomte, Fl. Gen. Indo-chine 4: 851 & 870--871. 1935; E. D. Merr., Brittonia 2: 197. 1936; E. D. Merr., Journ. Arnold Arb. 19: 65. 1938; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 2, 101. 1941; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 59 & 90. 1942; H. N. & A. L. Mold., Pl. Life 2: 61. 1948; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 136 & 181. 1949; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 3, 101. 1959; Mold., Résumé 175, 263, 272, & 450. 1959; Mold., Fifth Summ. 1: 299, 446, & 462 (1971) and 2: 866. 1971; Mold., Phytologia 31: 395. 1975; Mold., Phytol. Mem. 2: 284, 288, 291, 386, & 537. 1980.

An erect, puberulent shrub or subshrub, to 2 m. tall; stems erect, terete or the younger parts subtetragonal; branches subtetragonal, fistulose, puberulent; leaves decussate-opposite, those of the inflorescence much smaller and shorter; petioles 1--2 cm. long, pubescent, canaliculate above; leaf-blades membranous or chartaceous, ob-oval or elliptic to elliptic-oblong, 5--10 cm. long, 2.5--3.5 cm. wide, apically acuminate and often mucronulate, marginally entire, basally rounded or obtuse to acute, rugose and sparsely pilose above, softly pubescent beneath; secondaries 12--16, ascending, re-curved, prominent (like the midrib); tertiaries irregular; veinlet reticulation more or less distinct; inflorescence terminal or partly subterminal, broadly paniculate, 10--17 cm. long, 8--10 cm. wide, 2--3 times dichotomous, many-flowered, glandular-pubescent, the ultimate cyme-branches racemiform; bracts elliptic-lanceolate, foliaceous, apically mucronulate; bractlets subulate, 4--8 mm. long; pedicels very short, the upper 1--5 mm. long, the lower to 1 cm. long; calyx turbinate, herbaceous, green, 7--8 mm. long, externally somewhat silky-glandular-pubescent, the tube 2--3 mm. long, deeply 5-fid, the segments lanceolate, equal, herbaceous, green, 3--5 mm. long, apically acute; corolla white, 2--3 cm. long, glabrous or subglabrous, the tube very slender, 2.5 cm. long, upwardly slightly ampliate, almost straight, the limb in bud globose but finally 4-lobed, the lobes oblong, subequal, 8--9 mm. long, apically obtuse, two reflexed, the other three forming a lip; stamens long-exserted; filaments filiform; anthers large, oblong; style slender, long-exserted by 2--3 cm.; stigma shortly bifid, the branches apically acute; fruiting-calyx accrescent, red-violet, 2.5 cm. wide; fruit drupaceous, about 1 cm. long, black.

This species is based on an unnumbered Godefroy collection gath-

ered somewhere in Cochinchina, Vietnam, in September, 1875, and deposited in the Kew herbarium. Kuntze (1891) comments that "Sie ähneln einerseits *Cl. multiflorum* [now called *C. phlomidis* L. f.], aber die Blätter sind nicht oval rhombisch auf fast gleichlangen Stielen, auch nicht gekerbt gezähnt, die Kelche sind nicht kahl, aufgeblasen und etwa nur halbsogross, die Bracteen viel schmaler fast fädlich, die Inflorescenzzweige doppelt länger. Andererseits ist *Cl. Sieboldii* OK. = *Cl. divaricatum* S. & Z. nec Jack [now called *Caruopteris chosenensis* Mold.] zu vergleichen, aber ebenfalls durch die ganzrandigen obovaten, ausserdem nicht lang zugespitzten und nicht kahlen Blätter verschieden; ferner hat *Cl. Sieboldii* nur kurz gezähnten (nich 2/3 getheilte Kelche) Ketchen, z. Th. -- 3 cm lange Blütenstiele etc."

Merrill (1936) states that *C. godefroyi* "is not represented in Kuntze's herbarium", but this is not so -- it is well represented by Kuntze s.n., collected in Cambodia in March, 1875, deposited in the Britton Herbarium at the New York Botanical Garden. In his 1938 work he compares his *C. squiresii* (a synonym of *Glossocarya siamensis* Craib) with *C. godefroyi* and claims that they are very similar and "apparently belonging" in the "same group" of the genus.

Collectors have found *Clerodendrum godefroyi* along highways in limestone mountains, at 250--350 m. altitude, in flower in June and November. Collectors who describe the flower color at all (*viz.*, Charoenphol & al. 4519 & 4581 and Pierre 5224) uniformly refer to it as "white".

Dop (1935) cites unnumbered collections of Harmand and of Thorel from Laos, of Colliard, Geoffray, Lecomte & Finet, and Poilane from Cambodia, and of Geoffray, Pierre, and Poilane from Cochinchina.

A key to help distinguish this species from other Indochinese taxa will be found under *C. hahnianum* Dop in the present series of notes.

Citations: THAILAND: Charoenphol, Larsen, & Warncke 4519 (Ac), 4581 (Ac). CAMBODIA: Kuntze s.n. [III.1875] (N). LAOS: Thorel 2197 (Ca--54661). VIETNAM: Cochinchina: Pierre 5224 (B, Ca--53746, Ca--54647, N, S); Poilane 697 (F--photo, Ld--photo, N, S, Sg--photo). Tonkin: Poilane 8524 (W--2394552).

CLERODENDRUM GODEFROYI var. *INSULARE* Dop in Lecomte, Notul. Syst. 4: 12 [as "*Clerodendron*"]. 1920; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 59 & 90. 1942.

Synonymy: *Clerodendron godefroyi* var. *insulare* P. Dop in Lecomte, Notul. Syst. 4: 12. 1920.

Bibliography: Dop in Lecomte, Notul. Syst. 4: 12. 1920; Fedde & Schust., Justs Bot. Jahresber. 48 (1): 497. 1927; Dop in Lecomte, Fl. Gén. Indo-chine 4: 871. 1925; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 59 & 90 (1942) and ed. 2, 136 & 181. 1947; Mold., Résumé 175 & 450. 1959; Mold., Fifth Summ. 1: 299 (1971) and 2: 866. 1971; Mold., Phytologia 31: 395. 1975; Mold., Phytol. Mem. 2: 291, 386, & 537. 1980.

This variety differs from the typical form of the species in having its leaf-blades oboval or oblanceolate, apically acute or acum-

inate, basally acute or long-attenuate, and less pubescent or even glabrescent on both surfaces.

The variety is based on *Harmand 846*, *Lanessan 186*, and *Talmy s.n.* from Poulo-Condor, Cochinchina, Vietnam. Dop (1920) comments that "Tous les intermediares existent entre l'espece type et le type extreme de la variete".

Citations: VIETNAM: Cochinchina: *Lanessan s.n.* (B).

CLERODENDRUM GODEFROVI var. *OBLANCEOLATUM* Dop in Lecomte, Notul.

Syst. 4: 12 [as "*Clerodendron*"]. 1920; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 59 & 90. 1942.

Synonymy: *Clerodendron godefrovi* var. *oblanceolatum* Dop in Lecomte, Notul. Syst. 4: 12. 1920.

Bibliography: Dop in Lecomte, Notul. Syst. 4: 12. 1920; Fedde & Schust., Justs Bot. Jahresber. 48 (1): 497. 1927; Dop in Lecomte, Fl. Gén. Indo-chine 4: 871. 1935; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 59 & 90 (1942) and ed. 2, 136 & 181. 1949; Mold., Résumé 175, 272, & 450. 1959; Mold., Fifth Summ. 1: 299 & 462 (1971) and 2: 866. 1971; Mold., Phytologia 31: 395. 1975; Mold., Phytol. Mem. 2: 288, 386, & 537. 1980.

This variety differs from the typical form of the species in having its leaf-blades oblanceolate or lanceolate and marginally entire or somewhat sinuate.

The variety is based on *Lecomte & Finet 1446*, *1478*, & *1590* from Daban, Dalat, Cambodia. Dop (1935) cites also an unnumbered Evrard collection from Annam. In his 1920 work he comments that "Cette variete, qui est intermediaire entre l'espece type et le *Cl. Lloydianum* Craib, est constamment parasitée par un champignon dont les pycnides recouvrent toute la surface foliaire".

Nothing is known to me of this taxon beyond what is stated in its bibliography (above).

CLERODENDRUM GOSSWEILERI Exell in Good & Exell, Journ. Bot. Brit.

68, Suppl. 2: 142--143 [as "*Clerodendron*"]. 1930; B. Thomas, Engl. Bot. Jahrb. 68: [Gatt. Clerod.] 41, 71, & 93. 1936.

Synonymy: *Clerodendron gossweileri* Exell in Good & Exell, Journ. Bot. Brit. 68, Suppl. 2: 142. 1930. *Clerodendron gossweileri* R. Good apud Fedde & Schust., Justs Bot. Jahresber. 58 (2): 329 sphalm. 1938.

Bibliography: Exell in Good & Exell, Journ. Bot. Brit. 68, Suppl. 2: 142--143. 1930; A. W. Hill, Ind. Kew. Suppl. 8: 54. 1933; B. Thomas, Engl. Bot. Jahrb. 68: [Gatt. Clerod.] 41, 71, & 93. 1936; Fedde & Schust., Justs Bot. Jahresber. 58 (2): 329. 1938; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 50 & 90. 1942; H. N. & A. L. Mold., Pl. Life 2: 62. 1948; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 118 & 181. 1949; Mold., Résumé 146 & 450. 1959; Mold., Fifth Summ. 1: 242 (1971) and 2: 866. 1971; Mold., Phytol. Mem. 2: 2: 232, 386, & 537. 1980.

A shrub or tree; branchlets minutely pubescent; leaves subopposite; petioles rather stout, 1.5 cm. long, tomentose; leaf-blades obovate, about 17 cm. long and 10 cm. wide, apically subacuminate, marginally plainly dentate, sparsely puberulent or subglabrous above,

pubescent beneath especially on the venation; inflorescence terminal, composed of dense subcapitate cymes; flowers very numerous, pedicellate; peduncles to 15 cm. long, branched near the apex, minutely pubescent; pedicels 2 mm. long, appressed-pubescent; calyx externally sparsely puberulent, the tube 3 mm. long, the lobes ovate-triangular, 1.5 mm. long; corolla hypocrateriform, its tube to 2.5 cm. long, narrow, about 5 times as long as the calyx, sparsely pilose or sometimes subglabrous, the lobes much shorter than the tube, 2.5--3 mm. long, 2 mm. wide, glabrous; stamens plainly exerted, projecting about 1.5 cm. beyond the corolla-mouth.

This species is based on *Gossweiler 8830* from 900 m. altitude at Rianzondo, near the Lucala River, Duque de Bragança, in the Cuanza Norte district of Angola, flowering in September, and deposited in the herbarium of the British Museum in London.

Exell (1930) notes: "Probably nearest to *C. Bakeri* Gürke [now known as *C. schweinfurthii* var. *bakeri* (Gürke) Thomas], from West Tropical Africa, but distinguished by the pubescence on the lower surface of the leaves and on the calyx, and by the smaller corolla-lobes".

Thomas (1936), citing only the type collection, says "Diese Art ist mir nur aus der Beschreibung bekannt; danach dürfte sie mit der vorigen [*C. schweinfurthii* Gürke] identisch sein".

Citations: ANGOLA: Loanda: *Gossweiler 8830* [Mo. Bot. Gard. Type Photo A.885] (Gz--photo of type, N--photo of type).

CLERODENDRUM GRANDIFLORUM (Hook.) Schau. in A. DC., Prodr. 11: 659 [as "*Clerodendron*"]. 1847; Mold., Geogr. Distrib. Avicenn. 5. 1939.

Synonymy: *Aegiphila grandiflora* Hook., Curtis Bot. Mag. 72 [ser. 3, 2]: pl. 4230. 1846. *Clerodendron sagraei* Schau. in A. DC., Prodr. 11: 659. 1847. *Clerodendron grandiflorum* (Hook.) Schau. in A. DC., Prodr. 11: 659. 1847 [not H. J. Lam, 1919]. *Rondeletia* sp. "de la Havane" ex Lemaire, Fl. Serres, ser. 1, 4: 324 in syn. 1848. *Aegiphila aurea* Turcz., Bull. Soc. Imp. Nat. Mosc. 36 (2): 218. 1863. *Citharexylum longiflorum* Turcz., Bull. Soc. Imp. Nat. Mosc. 36 (2): 207--208. 1863. *Clerodendron grandiflorum* Schau. apud Benth. in Benth. & Hook. f., Gen. Pl. 2 (2): 1156. 1876. *Clerodendron sagraei* [Schau.] apud B. Thomas, Engl. Bot. Jahrb. 68: [Gatt. Clerod.] 18. 1936. *Clerodendron diversifolium* L. C. Rich. ex Mold., Prelim. Alph. List Inv. Names 19 in syn. 1940 [not Vahl, 1891. *Citharexylum longiflorum* Turcz., ex Alain in Leon & Alain, Fl. Cuba, imp. 1, 4: 301 sphalm. 1957. *Clerodendron sagraeum* Schau., in herb.

Bibliography: W. Hook., Curtis Bot. Mag. 72 [ser. 3, 2]: pl. 4230. 1846; Paxt., Mag. Bot. 13: 115, 217, 218, & 275. 1847; Schau. in A. DC., Prodr. 11: 655 & 659. 1847; Lemaire & Van Houtte, Fl. Serres, ser. 1, 4: 324--324b, pl. 324. 1848; A. Rich. in Sagra, Hist. Fis. Polit. Nat. Cuba 11 (2): 147. 1850; Buek, Gen. Spec. Syn. Candoll. 3: 9 & 106. 1858; Sagra, Icon. Pl. Fl. Cub. 41. 1863; Turcz., Bull. Soc. Imp. Nat. Mosc. 36 (2): 207--208 & 218. 1863; Griseb., Cat. Pl. Cub. 216. 1866; Pritzel, Icon. Bot. Ind. 1: 23. 1866; Hereman, Paxt. Bot. Dict. 13. 1868; Benth. in Benth. & Hook. f., Gen. Pl. 2 (2): 1156. 1876; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 1: 46,

549, & 561. 1893; Urb., *Symb. Antill.* 3, imp. 1, 368. 1903; O. E. Schulz in Urb., *Symb. Antill.* 6: 68--69. 1909; H. J. Lam, *Verbenac. Malay. Arch.* 320 & 363. 1919; Bakh. in Lam & Bakh., *Bull. Jard. Bot. Buitenz.*, ser. 3, 3: 95. 1921; Stapf, *Ind. Lond.* 1: 79. 1929; Mold., *Brittonia* 1: 468--469 & 472. 1934; B. Thomas, *Engl. Bot. Jahrb.* 68: [Gatt. *Clerod.*] 18. 1936; Mold., *Geogr. Distrib. Avicenn.* 4, 5, & 37. 1939; Mold., *Prelim. Alph. List Inv. Names* 2, 19, 20, & 21. 1940; Mold., *Alph. List Inv. Names* 2, 17, 19, & 21. 1942; Mold., *Known Geogr. Distrib. Verbenac.*, ed. 1, 24, 72, 84, 88, & 90. 1942; Jacks. in Hook. f. & Jacks., *Ind. Kew.*, imp. 2, 1: 46, 549, & 561. 1946; Mold., *Alph. List Cit.* 1: 3, 5, 15, 24, 67, 89, 99, 116, 118, 186, 187, 273, 315, & 316 (1946), 2: 347, 349, 358, 418, 466, 468, 646, 647, & 649--651 (1948), 3: 663, 695, 866, 869, 889, 924, & 930 (1949), and 4: 1021, 1030, 1035, 1038, 1084, 1137, 1144, & 1162. 1949; Mold., *Known Geogr. Distrib. Verbenac.*, ed. 2, 42, 43, 45, 158, 174, 179, & 181. 1949; Roig, *Dicc. Bot. Nom. Vulg. Cub.* 2: 716 & 1005. 1953; Syngé in Chittenden, *Roy. Hort. Soc. Dict. Hort.*, ed. 2, 1: 505. 1956; Alain in León & Alain, *Fl. Cuba*, imp. 1, 4: 299, 301, 310, & 319--321, fig. 138. 1957; Mold., *Biol. Abstr.* 32: 2353. 1958; Mold., *Phytologia* 6: 276 (1958), 6: 453--454 (1959), and 7: 76. 1959; Mold., *Résumé* 50, 51, 53, 216, 229, 252, 262, 264, 268, 273, 440, 447, & 450. 1959; Mold., *Résumé Suppl.* 1: 4, 15, 16, & 25. 1959; Jacks. in Hook. f. & Jacks., *Ind. Kew.*, imp. 3, 1: 46, 549, & 561. 1960; Mold., *Biol. Abstr.* 36: 4036. 1961; Mold., *Phytologia* 7: 458. 1961; Hocking, *Excerpt. Bot. A.5:* 44. 1962; Urb., *Symb. Antill.* 3, imp. 2, 368. 1964; Liogier, *Fl. Cub. Supl.* 124. 1969; Mold., *Fifth Summ.* 1: 95, 98, 358, 378, 379, 427, 434, 446, 454, & 465 (1971) and 2: 866. 1971; Gibbs, *Chemotax. Flow. Pl.* 3: 1753 (1974) and 4: 2080. 1974; Alain in León & Alain, *Fl. Cuba*, imp. 2, 2: 299, 301, 310, & 319--321, fig. 138. 1974; Mold., *Phytol. Mem.* 2: 88, 91, 349, & 537. 1980; Capote & García, *Revist. Jard. Bot. Nac.* 4: 48. 1983; H. N. & A. L. Mold. in Dassan. & Fosb., *Rev. Handb. Fl. Ceyl.* 4: 418. 1983; Raj, *Rev. Palaeobot. Palyn.* 39: 358, 374, 383, & 394. 1983; Mold., *Phytologia* 57: 478 (1985), 58: 198 (1985), and 59: 117, 252, 344, & 347. 1986.

Illustrations: W. Hook., *Curtis Bot. Mag.* 72 [ser. 3, 2]: pl. 4230 (in color). 1846; Paxt., *Mag. Bot.* 13: 217 (in color). 1847; Lemaire & Van Houtte, *Fl. Serres*, ser. 1, 4: pl. 324 (in color). 1848; Alain in León & Alain, *Fl. Cub.*, imp. 1, 4: 320, fig. 138 (1957) and imp. 2, 2: 320, fig. 138. 1974.

A shrub or tree, 1--4 m. tall; branches sometimes procumbent; branchlets slender, light-gray or almost white, obtusely and usually obscurely tetragonal or terete, glabrous, tuberculate; twigs similar to the branchlets but buff-colored or brownish and more or less puberulent or pubescent, often more or less verruculose-lenticellate; nodes tetragonal-compressed, not annulate; principal internodes 1--10.5 cm. long; leaves decussate-opposite or whorled in 5's, the members of a pair or whorl often approximate; petioles slender or stoutish, 2--9 mm. long, minutely puberulent; leaf-blades firmly chartaceous or coriaceous, bright- or dark-green above, lighter beneath, elliptic, obovate, or oblanceolate to obovate-oblong, oblong, or sublanceolate, 4--21 cm. long, 1.8--7.2 cm. wide, apically round-

ed to abruptly short-acuminate or short-cuspidate, marginally entire and revolute, basally acute or rounded to narrowly subcordate, glabrous above or obscurely puberulent along the midrib, minutely puberulent on the venation or glabrous beneath; midrib slender, flat above, prominent beneath; secondaries slender, 6--8 per side, arcuate-ascending, prominulent beneath; vein and veinlet reticulation abundant, slightly prominulent beneath, the larger portions often also subprominulent above; inflorescence axillary or subterminal to terminal, cymose-corymbose or paniculate, 9.5--12 cm. long, trichotomous, few-flowered or loosely many-flowered, usually 9--18-flowered, subequalling the subtending leaves, basally bibracteolate; peduncles slender, 3.5--12 cm. long, minutely puberulent, buff-colored; pedicels very slender, 4--13 mm. long, minutely puberulent; bracts none; bractlets few, linear, 2--4 mm. long, puberulent; prophylla linear or setaceous, 1--2 mm. long, puberulent; flowers nutant during anthesis; calyx campanulate or cupuliform, about 3 mm. long, membranous, rather broad, 5-angular, basally nigrescent, externally puberulent or hirtellous, the rim truncate and shortly 5-dentate, the teeth very small, apically cuspidate, basally subquadrangular, reflexed; corolla tubular-infundibuliform, yellow, 2--3 cm. long, externally puberulent or softly pubescent, internally glabrous, 5--6 times as long as the calyx, its tube 4--5 times as long as the calyx, the limb small, 5-lobed, often not spreading, the lobes ovate, subequal, apically acute, erect or spreading; stamens inserted in a whorl in the lower portion of the corolla-tube, in 2 unequal pairs, long-exserted; filaments slender, twice as long as the anthers, glabrous, basally dilated; anthers dorsifixed, oblong-sagittate or elliptic; style filiform, as long as the stamens, not thickened apically; stigma bifid; ovary globose, 4-celled, each cell 1-ovulate; fruiting pedicels erect; fruiting-calyx somewhat accrescent, pelviform; fruit drupaceous, obovate or obovate-rotund to oblong, 7--10 mm. long, 6--11 mm. wide, apically compressed, very fleshy, externally glabrous or pulverulent, blue or light-blue, glaucous, nigrescent in drying, composed of 4 (or by abortion only 1--3) elongate semicylindric pyrenes, the pulp greenish.

Although it is now known that this species is endemic to Cuba, Hooker (1846) says: "Of the native country of this very pretty shrub I regret to say we are ignorant. We are indebted for flowering specimens, in December, 1845, to Mr. Henderson, of Pine-apple Place, Kensington, who received plants from Mr. Makoy, of Liège, under the erroneous name of 'yellow *Rondeletia*'; and about the same time also, from Messrs. Lucombe and Pince, of the Exeter Nursery. It is quite clear that this is no *Rondeletia*, nor any Rubiaceous plant, but a true *Aegiphila*, with singularly large yellow tubular flowers, well worthy of a place in every collection, flowering as it does in the middle of winter in a warm stove, and then the flowers are succeeded by the glaucous-blue berries." Actually the fruits are drupes and the plant is not an *Aegiphila*, but is a true and typical *Clerodendrum*.

[to be continued]